Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A modem interface for transferring data between a high data rate interface and a wireless interface, the modem interface comprising:

a plurality of parallel data highways having frames, each with sixteen time slots for transferring data, the plurality of parallel data highways outputting data to the high data rate interface and the wireless interface in selected time slots, each parallel data highway being at least partially dedicated to a separate function, wherein:

a first parallel data highway using all sixteen of its time slots for transferring data to and from an external parallel data highway;

a second parallel data highway using eight of its time slots to transfer data to and from a digital signal processor (DSP) and using eight of its time slots to interface with telephone interface components; and

a third parallel data highway using nine of its time slots for high –level data link controlling (HDLC) controllers, using three of its time slots to transfer data to and from a second processor, and using four of its time slots for carrying data received and for transmission over the wireless interface, said transmission data being transmitted over four traffic channels;

~~at least one of the parallel data highways receiving data from the high data rate interface;~~

~~at least one of the parallel data highways having an input configured to receive data from the wireless interface in selected time slots; and~~

[[a]] the [[first]] DSP processor for controlling data transfer between the plurality of parallel data highways and sending data using a sub-plurality of the parallel data highways;

[[a]] the second processor sending data using a single one of the parallel data highways;

one of the [[first]] DSP and second processors slaved to the other of the [[first]] DSP and second processors; and

said two processors using said parallel data highways at the high data rate interface and thereby communicating at a high data rate using said parallel data highways.

2. (Original) The modem interface of claim 1 wherein the high data rate interface is an IOM-2 highway.

3. (Original) The modem interface of claim 1 wherein the high data rate interface is a PCM highway.

4. (Cancelled).

5. (Currently Amended) The modem interface of claim [[4]] 1 wherein each of the three parallel data highways has a 2 Mb/s data rate.

6. (Previously Presented) The modem interface of claim 1 further comprising a plurality of read and write devices, each write device fixedly writing to one of the plurality of parallel data highways and each read device reading data from any of the plurality of parallel data highways.

7. (Previously Presented) The modem interface of claim 6 wherein the processor controls each read device so that each read device reads from a selected one of the parallel data highways.

8. (Cancelled).

9. (Currently Amended) A method for transferring data between a high data rate interface and a wireless interface, the method comprising:

providing a plurality of parallel data highways having frames, each with sixteen time slots for transferring data[[,]]; ~~each parallel data highway being at least partially dedicated to a separate function~~

inputting data to the parallel data highways from the high data rate interface and the wireless interface in selected time slots;

controlling data transfer between the plurality of highways; and

outputting data to the high data rate interface and the wireless interface in selected time slots;

said parallel data highways being at least partially dedicated to a separate function wherein:

a first parallel data highway using all sixteen of its time slots for transferring data to and from an external parallel data highway;

a second parallel data highway using eight of its time slots to transfer data to and from a digital signal processor (DSP) and using eight of its time slots to interface with telephone interface components; and

a third parallel data highway using nine of its time slots for high –level data link controlling (HDLC) controllers, using three of its time slots to transfer data to and from a second processor, and using four of its time slots for carrying data received and for transmission over the wireless interface, said transmission data being transmitted over four traffic channels;

and wherein ~~one of the plurality of parallel data highways only receives data from the high data rate interface and a first~~ the DSP processor for sending data using a sub-plurality of the parallel data highways and [[a]] the second processor sending data using a single one of the parallel data highways, one of the [[first]] DSP and second processors slaved to the other of the [[first]] DSP and second processors, and said two processors using said parallel data highways at the high data rate interface and thereby communicating at a high data rate using said parallel data highways.

10. (Original) The method of claim 9 wherein the high data rate interface is an IOM-2 highway.

11. (Original) The method of claim 9 wherein the high data rate interface is a PCM highway.

12. (Cancelled).

13. (Previously Presented) The method of claim 9 wherein each of the three parallel data highways has a 2 Mb/s data rate.

14. (Previously Presented) The method of claim 9 wherein the controlling includes using a plurality of read and write devices, each write device fixedly writing to one of the plurality of parallel data highways and each read device reading data from any of the plurality of parallel data highways.

15. (Currently Amended) A radio network terminal (RNT) for transferring data between a high data rate interface and a wireless interface, the RNT comprising:

a receiver and a transmitter for transferring data over the wireless interface;

an input and an output for transferring data over the high data rate interface;

a plurality of parallel data highways having frames, each with sixteen time slots for transferring data, the plurality of parallel data highways outputting

data to the high data rate interface and the wireless interface in selected time slots, each parallel data highway being at least partially dedicated to a separate function, wherein:

a first parallel data highway using all sixteen of its time slots for transferring data to and from an external parallel data highway;

a second parallel data highway using eight of its time slots to transfer data to and from a digital signal processor (DSP) and using eight of its time slots to interface with telephone interface components; and

a third parallel data highway using nine of its time slots for high –level data link controlling (HDLC) controllers, using three of its time slots to transfer data to and from a second processor, and using four of its time slots for carrying data received and for transmission over the wireless interface, said transmission data being transmitted over four traffic channels;

~~at least one of the parallel data highways only receiving data from the high data rate interface;~~

~~at least one of the parallel data highways having an input configured to receive data from the wireless interface in selected time slots;~~

[[a]] the [[first]] DSP processor for controlling data transfer between the plurality of highways and sending data using a sub-plurality of the parallel data highways; and

[[a]] the second processor sending data using a single one of the parallel data highways;

one of the [[first]] DSP and second processors slaved to the other of the [[first]] DSP and second processors; and

said two processors using said parallel data highways at the high data rate interface and thereby communicating at a high data rate using said parallel data highways.

16. (Previously Presented) The RNT of claim 15 wherein the receiver and the transmitter transfer data using QPSK modulation in CDMA format.

17. (Previously Presented) The RNT of claim 15 wherein the RNT is operatively coupled to an ISDN terminal via the high data rate interface.

18. (Cancelled).

19. (Cancelled).

20. (Original) The RNT of claim 15 wherein the high data rate highway is an IOM-2 highway.

21. (Currently Amended) A method of communicating data over a wireless interface of a wireless communication network having a first station and a second station, the method comprising:

producing data having a first high-level data link controlling (HDLC) encoding at the first station for transfer over the wireless interface;

encoding the first HDLC encoded data using three HDLC controllers into a second HDLC format at the first station such that the produced data is double HDLC encoded;

transmitting the double HDLC encoded data over the wireless interface using four traffic channels;

receiving the double HDLC encoded data at the second stations; and

removing the second HDLC encoding to recover the first HDLC encoded data at the second station, the first HDLC encoding and the second HDLC encoding facilitating error correction over the wireless interface while providing for [~~the~~] an integrity of first HDLC encoded data over the wireless interface.

22. (Previously Presented) The method of claim 21 wherein the first station is a radio network terminal and the second station is a radio carrier station, the method further comprising:

prior to producing the first HDLC encoded data, receiving the first HDLC encoded data from an IOM-2 highway.

23. (Previously Presented) The method of claim 21 wherein the first station is a radio carrier station and the second station is a radio network terminal, the method further comprising:

prior to producing the first HDLC encoded data, receiving the first HDLC encoded data from a PCM highway.

24. (Currently Amended) The modem interface of claim 1 further characterized by

the modem interface receiving data having a first high-level data link controlling (HDLC) encoding[[.]], the first HDLC encoded date being encoded into a second HDLC format at [[the]] a first station using three HDLC controllers such that the produced data is double HDLC encoded and the [[the]] double HDLC encoded data transmitted over the wireless interface using four traffic channels; and

the modem interface receiving the double HDLC encoded data and removing the second HDLC encoding to recover the first HDLC encoded data at the second station, the first HDLC encoding and [[the]] a second HDLC encoding facilitating error correction over the wireless interface while providing for an integrity of first HDLC encoded data over the wireless interface.

25. (Currently Amended) The method of claim 9 comprising:

producing data having a first high-level data link controlling (HDLC) encoding at [[the]] a first station for transfer over the wireless interface;

encoding the first HDLC encoded data into a second HDLC format using three HDLC controllers at the first station such that the produced data is double HDLC encoded;

transmitting the double HDLC encoded data over the wireless interface using four traffic channels;

receiving the double HDLC encoded data at the second station; and

removing the second HDLC encoding to recover the first HDLC encoded data at [[the]] a second station, the first HDLC encoding and the second HDLC encoding facilitating error correction over the wireless interface while providing for an integrity of first HDLC encoded data over the wireless interface.

26. (Previously Presented) The method of claim 25 wherein the first station is a radio network terminal and the second station is a radio carrier station, the method further comprising:

prior to producing the first HDLC encoded data, receiving the first HDLC encoded data from an IOM-2 highway.

27. (Previously Presented) The method of claim 25 wherein the first station is a radio carrier station and the second station is a radio network terminal, the method further comprising:

prior to producing the first HDLC encoded data, receiving the first HDLC encoded data from a PCM highway.

28. (Currently Amended) The RNT of claim 15 further characterized by:

the modem interface receiving data having a first high-level data link controlling (HDLC) encoding the first HDLC encoded <u>data</u> into a second HDLC format <u>using three HDLC controllers</u> at the first station such that the produced data is double HDLC encoded and the [[the]] double HDLC encoded data transmitted over the wireless interface <u>using four traffic channels</u>; and

the modem interface receiving the double HDLC encoded data and removing the second HDLC encoding to recover the first HDLC encoded data at the second station, the first HDLC encoding and the second HDLC encoding facilitating error correction over the wireless interface while providing for an integrity of first HDLC encoded data over the wireless interface.